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AUTHOR Rodriguez, Richard F.
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ABSTRACT

Biased assessment instruments and practices can lead to over-representation of minority children in special education classes. This paper analyzes the amount of variance in Mexican-American achievement test scores attributable to sociocultural factors. Fifty learning disabled Mexican-American elementary school students completed the Peabody Individual Achievement Test (PIAT) and Wide Range Achievement Test-R (WRAT-R). Their parents completed the Sociocultural Scales of the System of Multicultural Pluralistic Assessment. Sociocultural variables were not predictive of the total scores on the PIAT or WRAT-R. Some individual subtests of the PIAT and WRAT-R were significantly related to the Socioeconomic Scale or the Urban Acculturation Scale. In the latter scale, the Anglization factor was most important. These results suggest that the PIAT and WRAT-R are not discriminatory when used with lower socioeconomic or minority group children since a significant amount of variance could not be accounted for by sociocultural factors. This report contains 39 references. (SV)

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The Effect of Sociocultural Factors on the Achievement of Minority Children

Richard F. Rodriguez, Ph. D.
Associate Professor
Western New Mexico University
Silver City, N.M. 88061

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Richard F. Rodriguez, Ph. D.
Associate Professor
Western New Mexico University
Silver City, NM 88061

Abstract

This study investigated the amount of variance in the Peabody Individual Achievement Test (PIAT) and Wide Range Achievement Test - R (WRAT-R) which could be accounted for by the Sociocultural Scales—Family Size, Family Structure, Urban Acculturation, and Socioeconomic Status—within the Hispanic ethnic group of the System of Multicultural Pluralistic Assessment (SOMPA).

The sample group was comprised of 50 elementary age Mexican American children identified as learning disabled, and assigned part-time to a Resource Room. Results of the analysis indicated that significant correlations exist between Urban Acculturation and Socioeconomic Status and some subtests of the PIAT and WRAT-R. The results indicate that poor academic performance among lower SES children must be attributed to other factors in the child's development.

Introduction

Several authors have voiced serious concerns about the consequences of applying standardized psychological assessment measures to minority group children (Baca and Cervantes, 1984; Mercer and Lewis, 1979; Ysseldyke, 1979; Samuda, 1976). These authors state that many minority group children have been victimized by the application of standardized psychological measures that are culturally and linguistically biased and measure experiences and skills alien to their culture. In addition, more minority group children have been labeled, placed, tracked, grouped and guided on the basis of various test scores than from any other single factor in the classroom (Maestas, 1981; U. S. Bureau of the Census, 1979; Oakland, 1979).

There has been much concern on the part of parents and some special education personnel regarding the number of minority children in special education. Existing data appear to indicate that minority children are placed in special education out of proportion to their numbers in the general school population (Ortiz and Maldonado-Colon, 1986; Greenleaf, 1980; Mercer, 1979). The area where the data have proven most striking has been in classes for the mildly mentally handicapped. For example, Mercer (1973) has reported that Black children were seven times as likely and Mexican American children ten times as likely as Anglo children to be placed in special classes. Although these figures are based on observations in California, it is reasonable to expect that similar conditions occur whenever significant minority population exist, such as in Arizona, New Mexico, Colorado, and Texas (U. S. Bureau of the Census, 1979). In these southwestern states nearly one of every five children in public school is of minority ethnic background (U. S. Commission of Civil Rights, 1974). In addition, data from the Civil Rights Survey (1978) revealed that Arizona, California, Colorado and New Mexico had proportional discrepancies of Hispanic children in programs for the Educable Mentally Retarded. For example, in Colorado Hispanics constitute 15% of the total school enrollment but 26% of programs for the Educable Mentally Retarded. It was also reported that in New Mexico, Hispanics constitute 42% of the total school enrollment yet 57% in programs for the educable mentally retarded; Arizona 22% and 31%; and California with 21% and 27% respectively. However, Ortiz & Yates (1983) reported that in Texas, Hispanics are under represented in all categories of handicapping conditions except learning disabilities. In this category (LD), Hispanics are over represented. In Texas, Hispanics constitute 28% of the general school population but only 26% of the handicapped population. Ortiz & Yates (1983) also reported that Hispanics represented a 6.3% incidence in learning disabilities programs. When application of the Kaskowitz (1977) two percent incidence figure derived from national studies these authors found that 6.3% exceeds the expected number of learning disabled Hispanics by 315 percent!

As previously mentioned, at least one consequence of biased assessment practices is over representation of minority children in special education. Part of the problem is that adequate assessment instruments have not yet been developed which can fairly assess children of different linguistic or cultural groups (Baca & Bransford, 1981: Bernal, 1979). a more serious problem, however, is that there do not exist sufficient numbers of professional personnel adequately equipped to develop, administer, or interpret assessment instruments or procedures (Archuleta & Cervantes, 1981). Additionally, even for those children who are legitimately identified as requiring special education services, programs either do not exist or are inadequate (Wilkinson, Willigs, Ortiz, 1986; Baca, 1980; Hilliard, 1980). As a result, the testing establishment continues to be seriously challenged in regard to alleged discriminatory assessment practices involving minority group children. Through a series of litigation procedures method-

ology of norm-referenced testing itself and, more particularly, the conclusions and consequences flowing from the analysis of test results have been disputed. This movement has generated efforts to develop valid psychoeducational assessment techniques that take into account cultural and linguistic aspects. Thus, the educational field is currently witnessing a surge of interest in the sociocultural factors affecting the academic achievement of minority children. Research in this area points out that social and environmental factors play a crucial role in determining the extent to which educational potentialities are realized. For example, level of parental education, parental occupation, socioeconomic status, family size, and family structure have been identified as important in determining the educational achievement of many minority group children (Rodriguez, 1982, 1981).

There exists then a need for an efficient and effective system which will measure a child's intellectual ability taking into account sociocultural variables. The System of Multicultural Pluralistic Assessment (SOMPA) (Mercer and Lewis, 1977) is such a system.

Empirically it can be demonstrated that there exists a large amount of variance in school achievement among culturally and linguistically different children. However, it is not known whether and to what extent sociocultural variables explain this observable difference.

The purpose of this study was to investigate the amount of variance in the Peabody Individual Achievement Test (PIAT) and Wide Range Achievement Test - Revised (WRAT-R) which could be accounted for by the Sociocultural Scales—Family Size, Family Structure, Urban Acculturation, and Socioeconomic Status—within the Hispanic ethnic group of the System of Multicultural Pluralistic Assessment.

Method

Subjects - The study was conducted in an urban area of the Southwestern United States. The sample group was comprised of 50 elementary age Mexican American children identified as learning disabled, who were assigned part-time to a Resource Room. Parents of the 50 children were also subjects in the study. Subjects were drawn from nine schools which were selected because administrative records indicated a broad range of socioeconomic status among a predominantly Mexican American school population. The sample included 32 boys and 18 girls whose chronological age ranged from 81 months to 144 months with a Mean CA of 111.50 months (SD - 14.35).

Instruments - The System of Multicultural Pluralistic Assessment (SOMPA) measures a child's intellectual ability taking into account sociocultural variables. the SOMPA evaluates the child not only in terms of the standard norm, which gives his current level of function, but also in terms of socioculturally appropriate norms, which give his estimated learning potential.

The Peabody Individual Achievement Test (PIAT) (Dunn and Markwardt, 1970). The PIAT is an individually administered instrument which contains five subtests: Mathematics, Reading Recognition, Reading Comprehension, Spelling, and General Information. The Total Test is the sum of raw scores.

Procedure - The 50 children of the sample group were administered the PIAT by the researcher and graduate students enrolled in an educational testing class at the local university. The WRAT-R had been obtained by the Resource Room teacher of each participating school. The parents of the 50 children were administered the Sociocultural Scales of the SOMPA by the researcher. Administration of the scales was conducted in either English or Spanish depending on the preference of the parents. Individual homes of each of the parents was selected as the most desirable location.

Results

The purpose of this study was to investigate the amount of variance in the Peabody Individual Achievement Test (PIAT) and Wide Range Achievement Test - Revised (WRAT-R) which could be accounted for by the Sociocultural Scale—Family Size, Family Structure, Socioeconomic Status, and Urban Acculturation—of the System of Multicultural Pluralistic Assessment (SOMPA).

The data from this study show that the Sociocultural Scales did not contribute significantly to achievement tests scores as Mercer and Lewis (1977) demonstrated such factors contributed significantly to IQ scores. However, Urban Acculturation and Socioeconomic Status are significantly related to academic achievement.

In conclusion, this study revealed that sociocultural variables do not account for a significant amount of the variance of total scores on the PIAT and WRAT-R. However, the sociocultural variance which reflects the acculturation level of the family, and the socioeconomic status of the home, and expecially the Mexican American home, is significantly related to the achievement test performance of elementary age learning disabled Resource Room children. The effect was more prominent on performance on the PIAT than on the WRAT.

Discussion

The purpose of this study was to determine whether sociocultural factors contributed significantly to achievement test scores as Mercer and Lewis (1977) had shown such factors contribute to IQ scores. The multiple regression analysis revealed that the amount of variance in the PIAT and WRAT-R scores which could be accounted for by sociocultural factors was not significant. However, Urban Acculturation and Socioeconomic Status were significantly related to certain areas of academic achievement.

A survey of the literature in the field of Special Education, and particularly the assessment of minority group children, revealed that during the past decade some research studies have been directed toward the academic achievement of lower socioeconomic and minority group children. These research efforts have stated that discriminatory practices exist in the educational assessment of minority group children using standardized psychological measures. However, data directed at the problem of demonstrating the effects of discriminatory psychoeducational assessment against minority group children is, for the most part, meager.

Furthermore, the results from such measures should be suspect because of their uncertain relationship with school tasks and their failure to provide information that aids instructional decision making (Cummins, 1982). Some authors have stated that poor performance on standardized instruments are due to factors such as faulty educa-

tional planning, inappropriate curricula and unsystematic teaching methods, and not to cognitive inferiority (Wilkinson, Willig and Ortiz, 1986; Almanza and Mosley, 1980). Data from this study revealed that the PIAT and WRAT are not discriminatory when used with lower socioeconomic and minority group children since a significant amount of variance could not be accounted for by sociocultural factors. Consequently, statements that standardized academic achievement measures are discriminatory appear to be based on socially acceptable biases and not on actual data.

The poor academic performance of many minority group children, then, must be attributed to other factors in the environment and not entirely to standardized academic assessment measures (Ortiz, Garcia, Holtzman, Polyzoi, Snell, Wilkinson, and Willig, 1985). Clearly, factors having to do with the depth of language comprehension, parental attitudes toward school, and teacher awareness of the educational problems some minority groups have must also be considered as possible factors in the process of identifying academic deficiencies (Bessant-Byrd, 1981; Kroth, 1975).

Urban Acculturation was significantly related to some individual subtests of the PIAT and WRAT-R. This indicates that Urban Acculturation was an important correlate of academic achievement. Of the four factors that comprise the Urban Acculturation scale, Anglization appeared to be the most important. It consists of five questions: the highest grade completed by the head of household, the highest grade completed by mother/mother substitute, whether mother/mother substitute was reared in the South, and an interview rating of the English language.

Data of the study also revealed that Socioeconomic Status was significantly related to the individual subtests of the PIAT and WRAT. Socioeconomic Status consists of two factors which are occupation of head of household and source of income, that is to say, whether or not the head of household provides most of the family income. Zucker and Prieto (1981), Banks (1979) emphasized that many minority group homes are of low economic status. Consequently, lack of learning opportunities outside the home and lack of availability of academic related materials in the home affect educational performance in children.

Implications

This study revealed that the children of the research study group are deficient in reading, writing, and arithmetic skills. An obvious remedy to this dilemma is teacher training in task analysis and effective teaching strategies (Kourilsky and Quaranta, 1987). Siegal (1972) emphasized that the keystone to effective child learning is effective teaching, that is, the teacher's ability to redirect teaching efforts so as to think along these lines: "I know how to play checkers. Can I teach this child to play checkers and what is the best way for him to learn?" (p.351).

Some researchers have stated that discriminatory practices exist in the psychological assessment of minority group children, particularly in the case of Mexican American children. According to the Task Force Findings Specifying Remedies Available for Eliminating Past Educational Practices Ruled Unlawful under Lau versus Nichols (U. S. Office of Health, Education & Welfare, 1975), educational assessments should be made by persons who can speak and comprehend the language of the child. However, there is a shortage of persons, primarily certified educational diagnosticians, who are fluent

in both English and Spanish in the public schools and who are qualified to make educational judgments affecting minority group children, taking into account sociocultural variables (Rodriguez, Prieto, Rueda, 1984; Baca and Chinn, 1982; Saintz, 1980).

Recruitment policies must be established by universities so as to train minority group teachers and diagnosticians capable of implementing teaching expertise as well as educational cultural pluralism into the educational setting of minority group students. School Districts across the country are searching for and attempting to implement educational programs for their school-age populations. The results of this investigation provide school personnel with data that show the effect certain sociocultural factors have academic achievement, thus offering curricula builders and teachers avenues for better understanding the academically deficient child and, at the same time, challenging them to provide educational materials, instructions, and classroom environments relevant to each child (Prieto, Rueda, Rodriguez, 1981).

In conclusion, it must be remembered that assessment is only the first step in an educational program. Identification must be followed by diagnosis, appropriate intervention, and relevant classroom instruction. However, before the teaching process begins, Labov (1969) offered a phrase which may well serve as an excellent word of warning:

> Before we impose middle--class verbal style on children from other cultural groups, we should find out how much of this is useful for the main work of analyzing and generalizing, and how much is mere stylistic—or even dysfunctional. In high school and college middle-class children spontaneously complicate their syntax to the point that instructors despair of getting them to make their language simpler and clearer. In very learned journal one can find examples of jargon and empty elaboration—and complaints about it. Is the "elaborated code" of Bernstein really so flexible, detailed, and subtle as some psycholinguists believe? Is it not simply and elaborated style, rather than superior code or system?
>
> Our work in the speech community makes it painfully obvious that in many ways working-class speakers are more effective narrators, reasoners, and debaters than middle-class speakers who temporize, qualify, and lose their argument in a mass of irrelevant detail. Many academic writers try to rid themselves of that part of middle-class style that is empty pretension, and keep that part that is needed for precision. But the average middle-class speaker that we encounter makes no such effort: he is enmeshed in verbiage, the victim of sociolinguistic factors beyond his control (p. 12).

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